

LISTING OF CLAIMS:

1. (Currently amended) A method of registering an ~~identification~~identifier of a tire air pressure sensor device in a tire air pressure monitoring unit in a vehicle, in which the tire air pressure sensor device is provided for a tire of the vehicle and communicable with the tire air pressure monitoring unit, said method comprising:

setting ~~an identification registration condition to the~~ tire air pressure monitoring unit in an ~~identification registration condition~~, said identification registration condition allowing the tire air pressure monitoring unit to register the ~~identification~~identifier of the tire air pressure sensor device when an unlikely signal is received, said unlikely signal being unlikely to be transmitted under normal circumstances;

transmitting the unlikely signal from the tire air pressure sensor device;

receiving the unlikely signal by the tire air pressure monitoring unit; and

firstly registering, by the tire air pressure monitoring unit, the ~~identification~~identifier of the tire air pressure sensor device according to the identification registration condition in response to the ~~receive~~receiving of the unlikely signal.

2. (Currently amended) The method according to claim 1, wherein said unlikely signal includes data representing a predetermined air pressure in the tire detected by the tire air pressure sensor device, said predetermined air pressure is a pressure that is unlikely to be detected by the air pressure sensor device under normal circumstances, and said identification registration condition includes a case where the tire air pressure monitoring unit receives the unlikely signal.

3. (Currently amended) The method according to claim 1, wherein said unlikely signal includes data representing an unlikely change of the air pressure in the tire detected by the tire air pressure sensor device, said unlikely change of the air pressure is unlikely to be detected by the air pressure sensor device under normal circumstances, and said identification registration condition includes a case where the tire air pressure monitoring unit receives the unlikely signal including the data representing the unlikely change of the air pressure.

4. (Currently amended) The method according to claim 1, wherein said unlikely signal includes data representing a predetermined unlikely pressure generated by the tire air pressure sensor device, said predetermined unlikely pressure is unlikely to be detected by the air pressure sensor device under normal circumstances, and said identification registration condition includes a case where the tire air pressure monitoring unit receives the unlikely signal including the data representing the predetermined unlikely pressure.

5. (Original) The method according to claim 1, wherein said unlikely signal comprises pulse signals at unlikely intervals, said pulse signals at the unlikely intervals are unlikely to be transmitted from the tire air pressure sensor device under normal circumstances, and said identification registration condition includes a case where the tire air pressure monitoring unit receives the pulse signals at unlikely intervals.

6. (Original) The method according to claim 2, further comprising:

controlling the air pressure in the tire to supply/release air to/from the tire,

wherein said detected air pressure in the tire detected by the tire air pressure sensor device corresponds to the controlled air pressure therein, and said controlled air pressure is unlikely to be detected by the air pressure sensor device under normal circumstances.

7. (Original) The method according to claim 6, wherein said controlled air pressure represents an air pressure of the tire which is no more than an atmosphere pressure.

8. (Currently amended) The method according to claim 7, wherein said tire ~~comprises~~is one of a predetermined number of tires, said tire air pressure sensor device ~~comprises~~is one of a predetermined number of tire air pressure sensor devices corresponding to the predetermined number of tires so that said tire air pressure sensor devices are provided for the tires, respectively, said tire air pressure sensor devices have the ~~identifications~~identifiers, respectively, and

wherein said identification registration condition ~~allowing~~allows the tire air pressure monitoring unit to register the ~~identification~~identifiers of the tire air pressure sensor device ~~devices and is a condition in which when the air pressures of all~~pressure of each of the tires ~~which is~~ are no more than the atmosphere pressure, ~~respectively, are received~~.

9. (Currently amended) The method according to claim 3, further comprising:
controlling the air pressure in the tire to supply/release air to/from the tire,
wherein said unlikely change of the air pressure in the tire is ~~happened by a result of~~ the control of the air pressure therein.

10. (Original) The method according to claim 9, wherein said air pressure in the tire changes to a first air pressure which is no more than an atmosphere pressure and to a second air pressure which is larger than the atmosphere pressure.

11. (Original) The method according to claim 4, further comprising:

providing externally a signal to the tire air pressure sensor device, and

wherein said unlikely pressure is generated by the tire air pressure sensor device as a dummy pressure in the tire according to the provided signal.

12. (Original) The method according to claim 11, wherein said generated unlikely pressure as the dummy pressure represents a vacuum pressure.

13. (Currently amended) The method according to claim 1, wherein said unlikely signal and the identification-identifier of the tire air pressure sensor device are transmitted with each other as transmission information, said receiving step ~~receives~~ includes receiving the transmission information by the tire air pressure monitoring unit and said ~~firstly~~ registering step further comprises:

~~firstly~~-determining whether the transmission information is unlikely to be transmitted under normal circumstances; and

~~secondly~~-registering the identification-identifier included in the transmission information signal in the tire air pressure monitoring unit as a check identification-identifier when

~~determining it is determined~~ that the transmission information is unlikely to be transmitted under normal circumstances ~~by the firstly determining step~~.

14. (Currently amended) The method according to claim 13, further comprising:

~~secondly determining~~, by the tire air pressure monitoring unit, whether the check ~~identification identifier~~ is registered therein;

~~thirdly determining~~, by the tire air pressure monitoring unit, whether the ~~identification identifier~~ included in the transmission information signal ~~checks out with~~corresponds with the registered check ~~identification identifier~~ when ~~the secondly determining step determines it is determined that that the check~~ ~~identification identifier~~ is registered in the tire air pressure monitoring unit;

~~fourthly determining~~, by the tire air pressure monitoring unit, whether the air pressure in the tire included in the transmission information signal is abnormal ~~in a case where the thirdly determining step determines when it is determined that the~~ ~~identification identifier~~ included in the transmission information signal ~~checks out~~corresponds with the registered check ~~identification identifier~~; and

indicating an alert when ~~the fourthly determining step determines it is determined that the~~ air pressure in the tire included in the transmission information signal is abnormal,

wherein said firstly determining step determines ~~the determination of whether the~~ transmission information is unlikely to be transmitted under normal circumstances is performed in a case where ~~the secondly determining step determines it is determined that the check~~ ~~identification identifier~~ is not registered in the tire air pressure monitoring, ~~or the thirdly~~

~~determining step determines and when it is determined that the identification identifier included in the transmission information signal does not check out correspond with the registered check identification identifier.~~

15. (Currently amended) The method according to claim 14, wherein said tire ~~comprises~~ is one of a predetermined number of tires, said tire air pressure sensor device ~~comprises~~ is one of a predetermined number of tire air pressure sensor devices corresponding to the predetermined number of tires so that said tire air pressure sensor devices are provided for the tires, respectively, said tire air pressure sensor devices have the ~~identifications~~ identifiers, respectively, ~~said firstly determining step and said step of determining whether the transmission information is unlikely to be transmitted under normal circumstances~~ further comprises:

~~fifthly~~-determining whether the transmission information includes the unlikely signal;

~~tentatively registering the identification identifier included in the transmission information of an unlikely signal~~ in the tire air pressure monitoring unit;

~~sixthly~~-determining whether a predetermined time ~~elapses~~ has elapsed from ~~starting the tentatively registration in the tentatively registering step~~ the start of the tentative registration; and

~~seventhly~~-determining whether a number of ~~identifications~~ identifiers which are tentatively registered by the tentatively registering step ~~equals to~~ is equal to the predetermined number of tires when ~~determining it is determined~~ that the predetermined time ~~does not elapse from starting the tentatively registration by the sixthly determining step~~ has not elapsed,

and wherein ~~said secondly registering step registers the step of registering the identifier as a check identifier~~ includes registering the tentatively registered ~~identifications~~ identifiers when

determining that the number of ~~identifications~~ identifiers which are tentatively registered by the ~~tentatively registering step~~ equals is equal to the predetermined number of tires.

16. (Currently amended) A system with a memory in a vehicle for registering an ~~identification~~ identifier of a tire air pressure sensor device in the memory, in which the tire air pressure sensor device is provided for a tire of the vehicle, said system comprising:

a receiving unit configured to receive an unlikely signal which is transmitted from the tire air pressure sensor device, said unlikely signal being unlikely to be transmitted therefrom under normal circumstances; and

a first registering unit configured to register the ~~identification~~ identifier of the tire air pressure sensor device in the memory in response to the receiving of the unlikely signal.

17. (Currently amended) The system according to claim 16, wherein said unlikely signal and the ~~identification~~ identifier of the tire air pressure sensor device are transmitted with each other as transmission information, said receiving unit receives the transmission information and said first registering unit further comprises:

a first determining unit configured to determine whether the transmission information is unlikely to be transmitted under normal circumstances; and

a second registering unit configured to register the ~~identification~~ identifier included in the transmission information signal in the memory as a check ~~identification~~ identifier when determining that the transmission information is unlikely to be transmitted under normal circumstances by the first determining unit.

18. (Currently amended) The system according to claim 17, wherein said unlikely signal includes data representing a predetermined air pressure in the tire detected by the tire air pressure sensor device, said predetermined air pressure is unlikely to be detected by the air pressure sensor device under normal circumstances, and said first determining unit determines that the transmission information is unlikely to be transmitted under normal circumstances when the received unlikely signal includes the data representing the predetermined air pressure.

19. (Currently amended) The system according to claim 17, wherein said unlikely signal includes data representing an unlikely change of the air pressure in the tire detected by the tire air pressure sensor device, said unlikely change of the air pressure is unlikely to be detected by the air pressure sensor device under normal circumstances, and said first determining unit determines that the transmission information is unlikely to be transmitted under normal circumstances when the received unlikely signal includes the data representing the unlikely change of the air pressure.

20. (Currently amended) The system according to claim 17, wherein said unlikely signal includes data representing a predetermined unlikely pressure generated by the tire air pressure sensor device, said predetermined unlikely pressure is unlikely to be detected by the air pressure sensor device under normal circumstances, and said first determining unit determines that the transmission information is unlikely to be transmitted under normal circumstances when the received unlikely signal includes the data representing the predetermined unlikely pressure.

21. (Original) The system according to claim 17, wherein said unlikely signal comprises pulse signals at unlikely intervals, said pulse signals at the unlikely intervals are unlikely to be transmitted from the tire air pressure sensor device under normal circumstances, and said first determining unit determines that the transmission information is unlikely to be transmitted under normal circumstances when the received unlikely signal comprises the pulse signals at unlikely intervals.

22. (Currently amended) The system according to claim 17, further comprising:

a second determining unit configured to determine whether the check ~~identification~~ identifier is registered in the memory;

a third determining unit configured to determine whether the ~~identification~~-identifier included in the transmission information signal ~~checks out~~corresponds with the registered check ~~identification~~-identifier when the second determining unit determines that the check ~~identification~~-identifier is registered in the memory;

a fourth determining unit configured to determine whether the air pressure in the tire included in the transmission information signal is abnormal in a case where the third determining unit determines that the ~~identification~~-identifier included in the transmission information signal ~~checks out~~corresponds with the registered check ~~identification~~-identifier; and

an indicating unit configured to indicate an alert when the fourth determining unit determines that the air pressure in the tire included in the transmission information signal is abnormal,

wherein said first determining unit is configured to determine whether the transmission information is unlikely to be transmitted under normal circumstances in a case where the second determining unit determines that the check identificationidentifier is not registered in the memory, or the third determining unit determines that the identificationidentifier included in the transmission information signal does not ~~check out~~correspond with the registered check identificationidentifier.

23. (Currently amended) The system according to claim 22, wherein said tire comprises is one of a predetermined number of tires, said tire air pressure sensor device comprises plural is one of a plurality of tire air pressure sensor devices corresponding to the predetermined number of tires so that said tire air pressure sensor devices are provided for the tires, respectively, said tire air pressure sensor devices have the identificationeach have identifiers, respectively, said first determining unit further comprises:

a fifth determining unit configured to determine whether the transmission information includes the unlikely signal;

a tentativelytentative registering unit configured to tentatively register the identificationidentifier included in the transmission information in the memory;

a sixth determining unit configured to determine whether a predetermined time elapses ~~from starting the tentatively has elapsed from the start of tentative~~ registration in the tentativelytentative registering unit; and

a seventh determining unit configured to determine whether a number of identificationsidentifiers which are tentatively registered in the memory equals to equals the predetermined

number of tires when the sixth determining unit determines that the predetermined time ~~does not elapse from starting the tentatively registration~~ has not elapsed,

and wherein said second registering unit registers the tentatively registered identifications identifiers when determining that the number of identifications identifiers which are tentatively registered in the memory ~~equals~~ is equal to the predetermined number of tires.

24. (Currently amended) A tire air pressure sensor device provided for a tire of a vehicle, said tire air pressure sensor device comprising:

an air pressure sensor configured to detect an air pressure in the tire;

a memory in which an ~~identification~~ identifier of the tire air pressure sensor device is stored;

a transmitting unit configured to transmit a transmission signal, said transmission signal including data representing the air pressure detected by the air pressure sensor and the ~~identification~~ identifier;

a receiving unit configured to receive a trigger signal transmitted from an exterior of the tire air pressure sensor device; and

a determining unit configured to determine whether the receiving unit ~~receives~~ has received the trigger signal,

wherein said transmitting unit is configured to transmit an unlikely signal when the determining unit determines that the receiving unit ~~receives~~ has received the trigger signal, said unlikely signal being unlikely to be transmitted from the transmitting unit under normal circumstances.

25. (Currently amended) The tire air pressure sensor device according to claim 24, wherein said transmitting unit is configured to transmit data representing an unlikely pressure as the unlikely signal when the determining unit determines that the receiving unit ~~receives-has~~ received the trigger signal, said unlikely pressure being unlikely to be detected by the air pressure sensor under normal circumstances.

26. (Currently amended) The tire air pressure sensor device according to claim 24, wherein said transmitting unit is configured to transmit pulse signals at unlikely intervals as the unlikely signal when the determining unit determines that the receiving unit ~~receives-has~~ received the trigger signal, wherein said pulse signals at the unlikely intervals are unlikely to be transmitted from the tire air pressure sensor under normal circumstances.

27. (Currently amended) A program product readable by a computer, in which the computer is installed in a vehicle and is communicable with a tire air pressure sensor device, and the tire air pressure sensor device is provided ~~for~~in association with a tire of the vehicle, said program product comprising:

first means for causing the computer to receive an unlikely signal which is transmitted from the tire air pressure sensor device, said unlikely signal being unlikely to be transmitted therefrom under normal circumstances; and

second means for causing the computer to register ~~the identification~~an identifier of the tire air pressure sensor device in a memory in response to the receiving of the unlikely signal.

28. (Currently amended) The program product according to claim 27, wherein said unlikely signal and the identification-identifier of the tire air pressure sensor device are transmitted with each other as transmission information, said receiving means receives the transmission information and said first means further comprises:

third means for causing the computer to determine whether the transmission information is unlikely to be transmitted under normal circumstances; and

fourth means for causing the computer to register the identification-identifier included in the transmission information signal in the memory as a check identification-identifier when determining that the transmission information is unlikely to be transmitted under normal circumstances.

29. (Currently amended) The program product according to claim 28, further comprising:

fifth means for causing the computer to determine whether the check identification-identifier is registered in the memory;

sixth means for causing the computer to determine whether the identification-identifier included in the transmission information signal ~~checks out~~corresponds with the registered check identification-identifier when determining that the check identification-identifier is registered in the memory;

seventh means for causing the computer to determine whether the air pressure in the tire included in the transmission information signal is abnormal in a case of determining that the

identification-identifier included in the transmission information signal ~~checks out~~corresponds with the registered check identification-identifier; and

eight means for causing the computer to set a data allowing an indication unit to indicate an alert when determining that the air pressure in the tire included in the transmission information signal is abnormal,

wherein said computer in the third means determines whether the transmission information is unlikely to be transmitted under normal circumstances in a case where the computer in the fifth means determines that the check identification-identifier is not registered in the memory, or the computer in sixth means determines that the identification-identifier included in the transmission information signal does not ~~check out~~correspond with the registered check identification-identifier.

30 (New) A method of registering identification data of tire air pressure sensor devices in a tire air pressure monitoring unit in a vehicle, wherein the tire air pressure sensor devices are associated with tires of the vehicle and can communicate with the tire air pressure monitoring unit, the method comprising:

transmitting unlikely signals from the tire air pressure sensor devices, respectively, wherein the unlikely signals are signals that are unlikely to be transmitted under normal operating conditions, and the unlikely signals include the identification data;

receiving the unlikely signals with the tire air pressure monitoring unit; and

registering the identification data in response to the receiving of the unlikely signals.